# LOUISVILLE MEDICAL NEWS.

*"NEC TENUI PENNÂ."*

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## COMMON SENSE IN SANITATION.

The mission of honest doubt in scientific progress is a very important one. It is the parent of conviction, the preserver of truth. Not to receive a new statement on faith is a cardinal rule with a truly scientific mind. To submit all alleged discoveries to the crucible of experiment is the only way to separate the dross from the gold. The objections urged by Dr. Griswold, in the NEWS, to the claims set up by zealous sanitarians have enough truth in them to serve the purpose of quite a number of conservative spirits in our profession and out of it.

It can do the world no harm to challenge the positive claims of the sanitarians of the day. It puts them on their mettle, makes them show such proof as must convince the apathetic and the severely practical man. An enthusiast is easily satisfied, when the evidence looks his way; if he would strike fire from others of a colder nature, he must first prepare his materials by a logical array of facts, and then follow these up by blows of rhetoric. At the root of the difference of opinion there is often a disagreement as to the kind of evidence necessary to establish a reasonable ground for action.

The class represented by Dr. Griswold are too exacting in this respect. They seem to forget that all through life we are determined in our course by presumptive evidence mainly. In any conjuncture calling for a choice between two lines of conduct, it is the unconscious play of common sense for the individual to cast a balance of the probabilities, and to be guided by that line which has the larger sum of probabilities in its favor.

So acceptable is this proposition that champions of opposing sides on the largest questions that have affected the human mind are as one upon it. In introducing his celebrated argument in the analogy of religion, Bishop Butler declares that he pretends only to show such presumptions in favor of his thesis as are considered good claims for serious consideration and good guides of conduct in the practical affairs of life. In other words, he holds that by presumptive evidence alone common sense is ruled in the majority of our acts. In an essay on judicial inquiries Voltaire wrote, "Almost all of human life revolves upon probabilities. Uncertainty is nearly always the lot of man. You will very rarely form a judgment if you wait for a demonstration." Assuming, then, that some obligation rests upon us to carry out a plan of life which is by general agreement considered more advantageous than any other, the sanitarian's line of argument would be to show if there is any thing in the sanitary science of the day that can be called sound presumptive evidence. Looked at in this way, we think it would not be difficult to bring a cloud of witnesses who would testify that statistical considerations taken from the official reports show that hostile influences of a certain kind work against human life with much more violence in some quarters than in others. More than thirty years ago this conclusion was pointed out by Dr. Farr; it has been frequently confirmed since. When cautious

inquiry has been made into the conditions of unhealthy districts, time and again it has appeared that the causes were local and removable. Sometimes the "unsanitary surroundings" were due to some injurious industry, sometimes to marshy or water-logged land, but more deadly than all the present removable causes of disease, according to Simon, is *local uncleanliness.*

When an estimate is made of the results of the application of the principles of public hygiene a very decided effect is perceived. Of course allowance must be made for some advances in the art curative, but after this is done there remains a large balance in favor of the view that by wise interference with the "surroundings" much public benefit has accrued. After an examination of the registrar's returns for last year, the Local Government Board of England says in its report:

> It may be roughly estimated that about a quarter of a million of persons were saved from death in the ten years 1871–80 who would have died if the death-rate had been the same as in the previous thirty years. If twelve cases of serious but non-fatal illness be reckoned for every death, it follows that about three million persons, or over one ninth of the whole population, have been saved from a sick-bed by some influences at work in the past decade which had not been in operation previously. Of the entire reduction of one per cent in the death-rate, more than three quarters come under the head of "the seven zymotic diseases"—that is, of the diseases that are most influenced by sanitary improvements, and most amenable to control by the action of sanitary authorities. And of this three quarters just one half or three eighths of the entire reduction is in "fever," the disease which more than any other shows itself in connection with such faults of drainage, of water-supply, and of filth-accumulation as it is within the province of good sanitary administration to remove.

If it be urged that this is not a strict demonstration of the effects of hygienic surroundings, it may be said in reply that the nature of the case does not admit of any other than broad statistical proof, and that what is advanced above certainly, to say the least, establishes a strong presumption in favor of the view that by proper care of the environment human life may be made healthier and longer.

## Original.

### OBSERVATIONS ON "HYGIENIC SURROUNDINGS."

#### PART II: THE PALUDAL THEORY OF MALARIA OBJECTED TO.

BY RUFUS W. GRISWOLD, M.D.

Going back from Dr. Speed's illustration of proof to the assumptions which, in common with many others, he makes as to the causes of diseases and the methods of preventing them, let us see something of what we *know* about it. "Perfect cleanliness forbids malaria," says the doctor. What are the proofs of it? In the first place, what is malaria? What is the essential factor that produces that striking and perhaps most important of all the so-called malarial diseases —intermittent fever? No one knows. It has never been isolated, exposed, or handled. It is an unknown and undetermined force, capable of producing certain phenomena in the animal system, but neither chemical analysis nor microscopic observation have determined what it *is;* nor have all the speculations and theories put forth in all the history of medicine served to place us on any substantial ground in relation to the modes and processes of its generation, and its evolution out of something into the organic system of animal life. The combined conditions of heat, moisture, and vegetable decomposition often given and popularly accepted as the causes of malarial diseases are not sufficient for the production of them, as is certainly and unquestionably shown by the broad fact that over numerous and extended areas of country, where they are in vigorous activity for generations in succession, these diseases do not exist. As an illustration of this, let us take the region of the Connecticut Valley where I am residing. For three generations, up to ten or twelve years ago, indigenous intermittent in the valley of the Connecticut was nearly a thing unknown. The closest inquiries fail to give a dozen native cases in fifty years. In 1862 a physician in Hartford related a case of indigenous intermittent as occurring in that city as something strange, and was laughed at in the county society meeting as the victim of a self-deception; but in the ten years last past it is quite safe to say that more than one fourth of the population—I think half of it—from the mouth of the river to the State line, a distance of seventy miles, and for a width on the aver-

age of ten miles, have had intermittent fever or some of the closely allied disorders born out of the same virulent disturbance, thousands of them many times, and for several consecutive seasons, persistently, ferociously, and beyond the power of sanitation to prevent. Sanitation, humbug! A cargo of bark is useful as a prophylactic and a temporary cure. Against its continuance and its spread, its marked territorial advance east and north every year, an army of sanitary experts would be as helpless as against the winds. I say as helpless, because the unknown factor that causes intermittent fever is not subject to any law of cleanliness, personal or public. "Cleanliness and drainage" do not "forbid the existence of [that] deleterious atmospheric condition" which produces the disease; nor does "perfect cleanliness forbid malaria" in the sense of preventing it. When it is asserted that they do, the assertion is an assumption that has not been proved—a deduction from a premise purely hypothetical and not from what we know. For this position I propose to give a reason.

In March of the present year I addressed to one hundred physicians in the valley of the lower Connecticut, from the Sound to the State line, scattered through forty towns, a printed postal card of inquiry as follows: "Have you had intermittent fever in your town the last few years? When did it first appear? To what do you attribute its rise and prevalence? What local causes have you likely to breed malaria and develop intermittent fever that had not existed in the years previous to its appearance in your neighborhood?" To these inquiries I received something over thirty replies from men so situated by residence as to cover, along with my personal knowledge, the whole territory mentioned. I respectfully submit that the correspondents were not teachers in the medical colleges, nor writers of medical books, nor members of health-boards, nor yet were they sanitary engineers. They were hard-headed every-day physicians, in practice ten, twenty, thirty, forty, and some of them fifty years; thoroughly acquainted with their respective localities in all their geographical features; who had witnessed the advent of intermittent into their clinics within the last ten years, and who knew exactly of what they were talking. Of the thirty-two respondents, the testimony of twenty-eight in relation to the last of the above-quoted queries was not always in the exact language, but in every instance in substance: *We have no local causes to generate malaria and produce intermittent that have not existed for years previous to its appearance.* One respondent suggested the *possibility* of the cause of the disease residing in the drinking-water of the city of Hartford, the supply being from reservoirs on a brook. One other mentioned as something new some small stagnant pools made by a railroad, and a third noticed a marked prevalence of the disease around a pond, the stowage capacity of which had been increased three years previous to the appearance of it; but neither of these appeared at all confident of their points, even as matters of belief, that malaria originated in or was evolved out of them.

Now as to this territory, the valley of the Connecticut from Massachusetts to the Sound is one of the most beautiful and well-kept sections of the country. The inhabitants are a cleanly, well-to-do, and hardy people. Their surroundings are as good as can be found. The condition of the region as regards any local causes of disease is continually and year by year one of improvement. It is better cultivated, more systematically drained, more thoroughly cleaned up, more carefully kept with each succeeding decade. As the years have gone by there has been in it less and less of that filth and vegetable decomposition out of which we are told that heat and moisture evolve the poison that induces malarial diseases. Since 1872 I have been patiently looking for that astute and scrutinizing sanitarian who could come in here and tell me *why* it is that, in a region where for the hundred years before the so-called paludal diseases were almost unknown, there should suddenly appear an epidemic that seizes the half of the entire population. I have not seen him. I am still waiting—we are all waiting—for him to come. If "our surroundings," over which Dr. S. tells us we "have great control," are at the bottom of all this trouble we want to know it and get "cleaned up."

Descending from the general to the particular, if it is said that malaria is bred in the filth of *personal* surroundings—that is, about the habitations of those who live comparatively uncleanly lives, whose houses are ill ventilated, and in supposed insalubrious neighborhoods—I reply that intermittent and the allied disorders as they appear to us are no respecters of persons or of conditions; they sit down alike in the villa of the rich and the shanty of the poor; they squat in the valley and roost on the hilltop beyond; they grapple alike the lean vegetarian and the rotund gormandizer; alike the lazy vag-

abond at the corner and the active citizen at his trade.

A careful consideration of the events presented in the advent of intermittent into this section in the last decade, and a retrospective of view several decades before in relation to its absence, irresistibly lead us to these conclusions:

That undetermined and hypothetical factor, which for want of a more appropriate name we call malaria, is not dependent for its existence upon our surroundings, but comes in spite of them; the castle of perfect cleanliness will not protect us from its approach. Nor is it dependent on heat and moisture operating upon vegetable or other decay; nor upon swamps or ponds or cesspools or sewer-filth or any other thing of the like. It presents itself away from, independent of, and beyond the influence of any of these; it thrusts itself into notice where they *are not*, and is for generations wanting where they *are;* and further, they are none of them competent for its development till some other force or principle has entered in. Whenever that intangible potency has entered any section it often seems in the *degree* of its virulence to become more particularly located about certain places, to be especially abundant there, and to superficial observation appears to be propagated in and evolved out of them. But whether it ever *is* multiplied in those places or is but an aerial visitant about them giving preference thereto for its more especial home, is a point as yet unsolved. But whether the one or the other, the history of its advent into the region we have alluded to presents incontrovertible proof that the foulest surroundings of any part of the valley had been impotent for the generation of a single particle of the especial essence that underlies an outbreak of intermittent till that especial essence was engrafted into them from without. There is no better reason for saying the surrounding is the father of the special factor of intermittent than that the river is the father of the fish. The river is *not* the father of the fish, it is simply the home of it; the fish is bred *within*, but not *from* it; it is begotten therein by its ancestor of the same type, and only of that ancestor. The river may have existed from the beginning, but so far as any thing is known of the sequence of order in nature it is utterly impotent to exhibit a single scale until the primordial antetype of that scale has been implanted within it. So also what we may choose to call the vicious surrounding is not the father of the paludal poison, be that surrounding a swamp or a pond or a sinkhole or a sewer; these are only places about which it makes a home, but not a necessary nor by any means an exclusive home, since it is found where none of these exist and beyond the range of them, and equally pungent and productive of mischief. If this position is not correct then it may be respectfully asked of him who attempts to controvert it that he shall tell us *why* it was that for the twenty or the fifty or the hundred years previous to the present decade over the territory alluded to, indigenous malarial diseases were not known, that region the meanwhile presenting certainly not less of *debris* and decomposition operated on every year by not less of the power of heat and moisture—certainly not any better cared for, certainly not any better cleaned—presenting equally bad swamps, precisely similar ponds, nests in vegetable and nests in animal life quite as filthy and vile. And then suddenly without any change in the physical features of the country, except a steady advance in improvement in all particulars, we should over the whole of it be stormed and taken by the potency of ague and fever? It is nine years since I began asking this *Why?*. It has not been answered; I do not expect it will be on any basis of unsanitary surroundings. It is an etiological question still unsolved, and while it is unsolved one may be pardoned for entertaining an amount of skepticism in relation to the connection assumed to exist between the supposed vicious surrounding and the infliction in contiguity with it. We have too much talk about what is *assumed* and too little about what is *known*. When a man has lived his lifetime by a particular stream, and his ancestors have inhabited there since 1680, and not a solitary case of ague was ever known in the neighborhood until 1872; and then suddenly, without change about the stream, coincident in point of time the whole region becomes inflicted with intermittent, it is idle to tell that man that the stream is the source of mischief; his reason ridicules your theory and his common sense rejects it. If he does not laugh in your face, he certainly will at your back. The *primum mobile* of the disturbance is some other potency.

Concluding, perhaps I ought to apologize to Prof. S. for taking his paper as the text for this. Let it not be thought I have any thing personal. My tilt is not against him, nor yet against his article except in a general way, but against the untenable and fal-

lacious deductions constantly spread abroad to the extent of an epidemic delusion, to the effect that our malarial diseases, our typhoids, our dysenteries, and our diphtherias are quite within our control and are to be stamped out by sanitary effort. Given that utopia typified in the doctor's perfect cleanliness, still there are potencies intangible and ungrasped which will flood in upon and subject us to their sway. The forces of dissolution were coincident in creation with the forces of vitality. Death is but a part of life. The pleasing delusion that man was originally determined to die only of old age is the myth of an exuberant imagination. Let me remind the professor that the perfect "one-hoss shay" of Dr. Holmes, to which he eloquently alludes, was not an *actuality*, but the ideal creation of a poetic brain. So also is that coming man, living in a perfected heaven of cleanliness, and so destined to dissolution only by the natural decay of years, an ideality whom even the last of his race will never see.

ROCKY HILL, CONN., November 3, 1881.

## Translations.

### AMMONIO-MERCURIAL PEPTONE IN SYPHILIS.

[Translated for the LOUISVILLE MEDICAL NEWS from *Le Progrès Médicale*, by M. A. C.]

Before the Hospital Medical Society, October 14, 1881, M. Dujardin Beaumetz in the chair, M. Martineau gave some of the recent results of his method of treating syphilis by means of ammonio-mercurial peptone subcutaneously injected. During the month ending with above date M. Martineau made three thousand and eighty-seven injections on one hundred and seventy-two patients. In the treatment of these cases he had used the remedy in varying amounts; in some instances carrying the dose up to .010 gram (one sixth of a grain). The experiments of Ormesano prove that the mercury is completely absorbed when thus exhibited, traces of it having been found in the urine after an injection of not more than .005 of a milligram ($\frac{1}{12800}$ grain).

The recent researches of other observers confirm the statements M. Martineau had made on a former occasion as to the result of his first experiments with the peptone—namely, that the drug does not when subcutaneously administered cause pain or give rise to salivation. For even when as much as .010 gram was given no evidence of mercurial poisoning could be found in the mouth.

M. Martineau has further been able to demonstrate the efficacy of his method of treatment upon certain patients whom he and M. Blachez have together had under observation since the 30th of August. The quantity of peptone given during these therapeutic investigations varied in doses of from two to seven milligrams (one thirty-second to one tenth of a grain). One patient had been the subject of syphilis for two years, and the disease presented symptoms of a grave character. He had syphilitic ulcers upon the head which were very painful, he could not retain the smallest dose of mercury upon his stomach, and the syphilitic fever was so intense as to necessitate his keeping his room. In this condition he was submitted to the peptone treatment, and by the time the twenty-fourth injection was reached the pain, ulceration, and fever had all disappeared.

## Correspondence.

### SWEET SPIRIT OF NITER AS SOLVENT FOR QUININE.

*Editors Louisville Medical News:*

In your issue of the 5th inst. I see a communication from Robert C. Kenner, A. B., M.D., of Batesville, Ark., claiming the discovery of spirit of niter as a solvent of sulph. quinia. The doctor says, "I was just thinking of some way to give it (quinine), and looking over my medicine-case the first article I saw was a bottle of the sweet spirit of niter. To one ounce of this I added twenty grains of sulphate quinia, and found to my surprise that I had discovered a perfect solvent for quinia sulphate."

Now if the doctor will refer to the April number (1877) of the Richmond and Louisville Med. Journal, page 325, embraced in a paper by a writer on the Cause of Periodicity or Mode of Action of the Agent producing Intermittent and Remittent Fevers, he will find the following statement. When speaking of the treatment of malarial spasms in children the writer says, "The treatment of these cases consisted in the administration of Hoffman's anodyne in from ten- to forty-drop doses, according to age, every fifteen or twenty minutes, with cold to the head and hot hip-baths during the spasms; solution of quinia in spiritus etheritis nitrosi immedi-

ately after their subsidence, paying no attention to the fever in the administration of quinine in this combination, always, however, keeping cold applications to the head and sponging the body with cold water during the hot stage."

I here remark by way of parenthesis that I recently noticed an article in some medical Journal in which the writer claims spirit of niter as a new solvent for sulph. quinia, and simply state that I have used it as the best solvent I could find for over fifteen years, but never until recently (August, 1876) employed it as a solvent of quinia for hypodermic medication; but after trying several formulæ published, and finding all of them too irritating, producing abscess, sores, or hard knots under the skin, I concluded to try spirits of etheris nitrosi *fff*, and now use this formula:

℞ Sulph. quiniæ ..... gr. 1;
Spts. nitri dulc. *fff*..... fl.℥j.
Mix and filter.

One ounce will dissolve readily fifty grains; and in fact one dram can be held in solution by one ounce; but the above gives a fraction over three grains to every thirty drops; the prescription containing sixteen doses of thirty drops each. I have used this formula for my own person very recently, producing only a temporary erythema of the skin. It is less painful than the formulæ containing sulphuric or carbolic acids.

The compound tincture of benzoin was first reported by Dr.—, of New York City, and I can after many trials indorse what Dr. Kenner says of it in toothache. I have been thus prolix in quoting from the above paper because I consider it very practical and because it may have been overlooked by many others as it was by Dr. Kenner.

J. P. THOMAS, M.D.

PEMBROKE, KY., November 12, 1881.

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*Editors Louisville Medical News:*

In the NEWS of November 5th is a communication from Dr. Robert C. Kenner, entitled A Perfect Solvent of Quinia Sulphate. This solvent proves to be spirit of nitrous ether.

Although sweet spirit of niter has been used as a solvent for quinia sulphate by physicians in this section for the past ten years, I must say, after several years' experience as a practical pharmacist, that I often find it a poor solvent, and I am always well pleased with my niter when it fails entirely in this regard.

Spiritus nitri dulcis, as prepared by the present U. S. process (which was modeled after the plan of Dr. Squibb), should contain no excess of acid and is almost neutral in its reaction. With age it becomes strongly acid, and it is then pronounced unfit for use by authorities on the subject.

Old and inferior niter will dissolve quinia sulphate readily, but a chemically pure article will not. I have now a specimen of sweet spirit of niter manufactured by Billings, Clapp & Co., of Boston, which will not dissolve two grains to the ounce, though I have had them mixed in a tightly-corked vial for several days. The addition of a few drops of almost any acid would at once overcome this difficulty. I fear that the specimen of niter used in Dr. Kenner's experiment was either old or of inferior quality, or the results would not have been so satisfactory.

In these days, when physicians and pharmacists are striving to render this drug palatable, I think it better to administer quinia in capsules or pills freshly made, or else give it in mucilaginous mixtures or elixirs highly flavored. To dissolve the quinia in any acid intensifies its bitterness, and, unless there is some special indication in a given case, it were better to give the niter separately. If any one should be in doubt on the subject, let him put twenty grains of quinia in an ounce of niter; if his niter is good, add a few drops of acetic acid to dissolve the quinia, and I am sure that one dose will carry conviction with it.

WILLIS I. COTTEL, M.D.

BRAIDWOOD, ILL., November 22, 1881.

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## Formulary.

INFANTILE DIARRHEA.

In infantile diarrhea due to indigestion and attended by acidity the following combination is very efficacious:

℞ Pulv. ipecacuanhæ ..... gr. ss; 0.03 Gm.;
Pulv. rhei..... gr. ij; 0.12 Gm.;
Sodæ bicarb..... gr. xij; 0.72 Gm.

Div. in chart No. xii et sig. One powder every four to six hours to an infant one year old.—*Dr. J. Lewis Smith.*

PYROGALLIC ACID FOR CHANCROIDS.

Vidal (*Bull. Gén. de Thérap.*; Chicago Medical Review) recommends the following as an application for chancroids:

℞ Amyli pulv..... ℥ ijss; 75.00 Gm.;
Vaselini..... ℥ j; 30.00 Gm.;
Acidi pyrogallici..... ʒ ijss; 10.00 fl.Gm. M.

This pasty mixture can be very thoroughly applied to the affected parts without liquefaction. The oint-

ment should be freshly made and kept in well-stoppered bottles, as it absorbs oxygen from the air, becoming brown. One application daily is all that is usually required. Chancroids of the anus may require two. There is nothing injurious in this treatment.

Levmoyer and Hitier claim to have obtained results of value by the use of pyrogallic acid combined as above.

CARBOLIC ACID IN HOOPING COUGH.

J. Baugh, M.D., of London, writes to the Canada Lancet:

A few days since I had several patients suffering with hooping cough, and, having administered the usual remedies without getting the least benefit, I commenced giving carbolic acid and glycerin in small doses, repeated every hour. I am glad to say the results were very satisfactory. The paroxysms of coughing and the vomiting, which in some cases were very severe and frequent, were reduced almost to a minimum in less than twenty-four hours. For a child three years old I give the following:

℞ Acidi carbolici..... gr. iv; 0.24 fl.Gm.;
Glycerini..... ℥ jss; 6.00 fl.Gm.;
Syr. simp..... ℥ iv; 16.00 fl.Gm.;
Aquæ, ad..... ℥ ij; 60.00 fl.Gm.

M. Sig. A teaspoonful every hour.

## Pharmaceutical.

Dr. J. Milner Fothergill on Use of Maltine.—In order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase "maltine." But, as Dr. Roberts points out, in order to make this ferment operative it must not be taken after a meal is over. Rather it should be added to the various forms of milk porridge or puddings before they are taken into the mouth. About this there exists no difficulty. Maltine is a molasses-like substance and mixes readily with the milk, gruel, etc., without interfering either with its attractiveness in appearance or its toothsomeness; indeed its sweet taste renders the gruel, etc. still more palatable. A minute or two before the milky mess is placed before the child or invalid the maltine should be added. If a certain portion of baked flour, no matter in what concrete form, were added to plain milk, and some maltine mixed with it before it is placed on the nursery table, we should hear much less of infantile indigestion and malnutrition.—*Lond. Practitioner.*

[This excellent preparation calls nothing but praise from every quarter. Its office is unique, and probably physiological medicine will never find a remedy that can serve as a substitute for it.]

Solvent for Gallic Acid.—Mr. Frederick Long writes to the British Med. Journal to say that he has accidentally found a method of dissolving gallic acid. Having a short time since a case of hematuria, the result of uric-acid gravel, he chanced to prescribe a mixture containing half a dram of gallic acid and a dram and a half of citrate of potassium, and to his surprise he found he had a perfectly clear liquid, the gallic acid being completely dissolved. He has since made further experiments, and he finds that with care twenty grains of citrate will dissolve as much as fifteen grains of gallic acid in an ounce of water, which will remain quite clear for any length of time. To be able to give gallic acid in perfect solution is a great advantage, as absorption must take place more rapidly when the salt is in solution than when simply suspended in mucilage. The citrate, being a very simple salt, can do no harm in any cases in which gallic acid is required. The only means of dissolving gallic acid for medicinal use heretofore known to Mr. Long have been alcohol and boiling water, both of which are practically useless.

## Miscellany.

A Possible Preventive of Rabies.—In the New York Med. Journal and Obstetric Review for November, 1881, Dr. L. L. Dorr, of San Francisco, discusses the etiology of hydrophobia, with special reference to climatic influence. The Pacific coast of America, he remarks, presents some peculiar features as regards this disease; from Behring's Strait to Cape Horn, he states, not a well-authenticated case of rabies was ever known. In support of this statement he adduces testimony to which great weight must be allowed. He therefore dissents from the common opinion that climate has no influence over the disease. A test of the power of the climate of the American Pacific coast to prevent the development of rabies can easily be made, he suggests, with strong probability of proving a blessing to hundreds of human beings who have no other hope. The period of incubation is so long in many cases that several dogs known to be badly bitten by a dog known to be suffering with rabies could be sent there under guard and kept behind prison-bars and under observation until the extreme limit was passed. Or a more practicable plan might be to have a number of

the many persons who are annually bitten by rabid dogs in the Eastern States and Europe go to that coast and remain there until the extreme limit of the possibilities was passed, selecting any place from Cape Horn to Behring's Strait—preferably, however, California, where they have a varied climate and all kinds of dogs and are in close communication with all parts of the world. The patient having a knowledge of these facts, and the support of hope of escape, it might be a power to prevent an attack; and if he were attacked the disease might be so modified by the climate as to render it susceptible of cure.

HOSPITALS LIABLE FOR MALPRACTICE.—It is stated in the New York Med. Journal that a pay patient of the Rhode Island Hospital sued to recover damages because of a hemorrhage leading to gangrene and amputation due, it was alleged, to the malpractice of an *interne*. During the suit the following statement of the legal liabilities of hospitals was made:

1. A hospital is not exempt from liability for unskillfulness or neglect, but is responsible for the exercise of reasonable care by the governing authorities in selecting physicians, surgeons, and *internes;* and if incompetent persons are appointed is responsible for the results of their neglect or want of skill.

2. If the rules of the hospital require that in specified cases an *interne* shall summon an attending surgeon and the *interne* fail to do so, the corporation may be liable for the consequences of his neglect.

"PAIN-KILLERS."—Prof. A. B. Prescott, of the University of Michigan, in an interesting paper on Nostrums, read at a State sanitary convention, and since printed in the Physician and Surgeon, thus refers to one of the more harmless kinds of these quack preparations, the "pain-killers":

Few of them are wholly inert, and most of them have a transient stimulant effect. Of *eight* of them subjected to analysis six were found to contain the ordinary spirit of camphor, which every thoughtful mother keeps in the house; three contained ammonia, such as any hortshorn-bottle would furnish; four were charged with red pepper; all had some alcohol; oil of sassafras was found in four of them, oil of turpentine in two of them, tincture of guaiac in two, chloroform in one, and myrrh in one. One of the most successful contained in a half-dollar bottle one and one half fluid ounces of soap liniment, with one half fluid ounce each of capsicum tincture, ammonia water, and alcohol—in all four articles of the United States Pharmacopeia. One that was sold at a dollar for a four-ounce bottle, by a Chinese doctor who had studied many years in the Celestial Kingdom, and who visited the towns of Michigan in a gorgeous car, drawn by four horses, with a company of musicians and a lecturer, consisted of camphor spirit, lavender compound spirit, ammonia water, sassafras oil, and alcohol. One made and sold in Germany as Nature's Own Cure, a sure relief for one hundred and sixty-six different diseases, consists of red pepper tincture, ammonia, and alcohol. Another noticed is a Five-Minute Fragrant Pain Cure, that will quiet every ache within five minutes by an exact time-piece. It is a mixture of ether, glycerin, common salt, and water. A Golden Wonder, or Seven Seals, for all the ills liable to occur in this life, is a mixture of ether, chloroform, camphor, peppermint oil, red pepper, and alcohol. Nearly all these articles are directed to be taken internally, as well as applied externally. Now almost every person would have some judgment as to how much ammonia, or turpentine, or camphor, or ether, or strong alcohol, it would be safe to take at once, if to be taken at all, in seeking relief from a violent pain; but what judgment can any body have as to a safe quantity of such talismanic articles as "Ready Relief," "Wizard Oil," or "Magic Master of Misery?"—*Boston Journal of Chemistry.*

A FALSE REPORT.—The very circumstantial report which we published as it went the rounds of the press, giving the fees of the medical attendants of the late President, turns out to be without foundation. It is denied by authority, and the assertion positively made that no bills will be presented. An *honorarium* is expected from Congress when it meets, though delicacy restrains the doctors from presenting an account for their certainly very laborious services. They may rest assured that posterity will say they deserved well of their country.

THE VALUE TO THE MEDICAL STUDENT OF EARLY SCIENTIFC TRAINING.—The student having been registered, and having thereby become entitled to commence his professional studies, it is in the highest degree important that the elementary and practical portions of them should be carried on in a

methodical and complete manner. Before an attempt is made to raise the superstructure of practical study, there should be provided a good concrete foundation of elementary matters; and no student should attempt or be allowed to attempt the serious study of the practical departments until he has given evidence of having laid such a foundation. On this point the prospectus of the Liverpool School of Medicine contains some excellent observations, which, we think, deserve publicity:

"A very frequent mistake is to commence the serious study of the practical part of medical education before the scientific part has been got quit of. However possible it may have been to combine the two in former years, when the scientific examinations were extremely lax, it is certainly not possible in the present day, when the primary or scientific examinations are so severe that it takes the whole powers even of an energetic student to prepare himself so as to go up, with confidence of passing, to the college primary at the end of his second winter. The attractions of surgery and hospital work are so much greater than those of anatomy and physiology, that the student is constantly tempted to take out senior classes or to seek for house-pupilships or dresserships too early. In due time it is found that these have enticed him from his less attractive but legitimate work, and have ended in causing his rejection; while from his imperfect knowledge he has not reaped the benefit from them which he might have done at a later period, when his whole energies could have been thrown into them, untrammeled by the fear of a scientific examination constantly hanging over his head."—*Brit. Med. Journal.*

Removal of the Uterus for Cancer.—The November number of the New York Med. Journal and Obstet. Review contains a "special article" by Dr. Andrew F. Currier, of New York, in which the various methods of removing the entire uterus for cancer, as practiced by Freund, Schröder, Czerny, and others, are reviewed, as well as the general question of the advisability of removing the organ. He thinks the advantages of the vaginal method over that of Freund (by laparotomy) are enormous; there is but one section of the peritoneum, the intestines are unharmed, there is a better opportunity to discover diseased tissue, which is most likely to be situated in the vicinity of the cervix, and, most important of all, the patients often survive, which is rare by Freund's method. But most patients are not likely to be benefited by either of these serious operations; the most hopeful cases will be those in which the patients are warned of their danger in the early stages of the disease, and in such cases Schröder's supra-vaginal excision of the entire cervix is most likely to be of service. This operation, while not so radical as removal of the entire organ, and hence not so efficient in cases involving the tissues above the internal os, is far less grave, and is, besides, more thorough than amputation of the cervix as it has been ordinarily done in the past. In those rare cases, however, in which the body of the uterus alone is involved, there is no alternative to laparotomy, either by Freund's operation or by some modification of it. As to drainage—a most important item in such cases—a perfect system seems impossible, but Bardenheuer's, although in the hands of others it has not fulfilled its author's expectations, affords as good results as any yet devised. As to the broad question of whether cancer of the uterus, and so cancer in general, can be radically cured, the author thinks the logic of events points to its approaching solution.

Liquid Pepsin a Solvent for Diphtheritic Membrane.—In the Lancet of October 22, 1881, Dr. W. Hale White says that, having tried the various solvents for diphtheritic membrane usually recommended, and finding them useless, he resorted to the acid glycerite of pepsin with encouraging results. The pepsin was warmed to 110° before use, and then sprayed into the throat so as to act not only upon the large pieces of membrane lining the trachea and larger bronchi, but also that in the smaller tubes. Any one can convince himself of the power of liq. pepsin as a solvent for the membrane by putting a piece in a test-tube with that fluid and maintaining it at a temperature of 100° to 110° F.; it is digested rapidly. Post mortems show no signs that the pepsin affected the healthy lungs or air-passages.

Dr. Foulis, of Glasgow, died on October 31st from diphtheria contracted, it is feared, while performing the operation of tracheotomy upon a patient suffering from the affection.

The Filaria a Nocturnal Parasite.—It has lately been discovered that this curious parasite during the day disappears from the blood, to reappear at night.

## Selections.

**Amyl Nitrite in Opium Poisoning.**—By E. F. Turner, M.D., Strayhorn, Miss. (St. Louis Courier of Medicine):

I was called August 16, 1880, to see ——, who was drunk and had been in the lock-up about three hours. I was told by the marshal that he looked like he was dying, but he thought he was "playing off." I found him as pale as a corpse, with heavy breathing; the respiration would intermit; it was three per minute one minute and two the next; the pupils extremely contracted; pulse not perceptible at the wrist; his eyes were set in his head about half open and perfectly insensible (I tested them with the end of my finger). I asked if he had had any chance at opium or any thing of the kind, and was told he had not. I searched diligently but did not find any clue. I was not certain as to what was the matter, but it struck me that if nitrite of amyl would speedily increase the heart's action and dilate the capillaries it would do away with two of the bad symptoms. So, with one hand on the wrist, I began administering it. I first let him take two full inspirations, and had the pleasure of feeling his pulse at the wrist. I waited a short time; the pulse began to grow feeble. I applied it again, and this time his skin became red; his respirations ceased to intermit. I sat by him and gave it at intervals, watching the effects. At the end of one hour his respiration was eight; at the end of one hour and a half he opened his eyes and swore a few times; at the end of two hours he was so much better that I stopped the remedy. He was in a profuse perspiration, sat up and urinated. At the end of three hours he was able to be carried home by his friends. Subsequently he came into my office and told me that on the day he took his spree, when he started to town, he took about eight times as much morphine as the usual dose (he had taken morphine and quinine the week before for neuralgia), and brought about the same amount to town with him, which he took about the time he was locked up.

I was called January 22, 1881, to see an infant six months old. The mother through mistake had given it one fourth grain of morphine at 12 o'clock and repeated it again at three. I arrived one hour and a half later, found the child well under the narcotic, so much so that I told the mother the case was very doubtful. I took the usual steps to relieve it, and remembering my other case I commenced the use of amyl nitrite with the same caution as before, and again had the pleasure of seeing its immediate effects; every inhalation acted like a charm. I remained with the child six hours, when it was relieved and I left for home.

**Treatment for Certain Kinds of Incontinence of Urine in Women.**—By J. Milne Chapman, M.B., M.R.C.S. (Edinburgh Medical Journal):

Mrs. C., aged forty-eight years, had frequent and painful micturition that had lasted three years and a half. When first ill a doctor told her she had inflammation of the bladder and some urethral affection (caruncle?), for both of which he treated her. September 30, 1880, could only retain water half an hour. The pudenda were reddened, also the whole vagina. Urethra somewhat gaping at its outlet. There was considerable pain on rubbing the two walls of the bladder over one another, or on introducing the sound into the viscus. Urine turbid, acid, and contained pus-cells, bladder-epithelium, and some oxalates. Urethra was dilated by the finger, increasing the bladder's retaining limit to an hour and a half. Nux vomica and uva ursi were given and the vaginitis treated by sedative applications. Effects of the dilatation disappeared in about three weeks. It was then repeated, but soon she relapsed into her former condition, minus, however, the pain and pus in the urine. Urethra examined by endoscope and a slight redness noticed. Iodoform bougies were used. Condition of bladder-wall as seen by the endoscope was normal, and now (November 8th) every hour, night and day, she had to empty her bladder. Total quantity of urine fifty ounces, which gave little more than two ounces at each micturition. Sound passed into the bladder three inches from external meatus, and could only be pushed half an inch farther, and thus pain was caused.

It occurred to me that gradual forcible dilatation of the bladder might relieve the patient. The bladder was distended with warm two-per-cent carbolic solution, and the quantity used measured four ounces. Any attempt to inject more caused the most intense pain, and the resistance was great as could be felt in compressing the ball of the syringe. From this date the bladder was filled to distension daily, injection being stopped when pain became great and resistance reached a high point. The apparatus used was Higginson's syringe attached to an ordinary catheter, care being taken to prevent the access of air to the bladder. Each day there was a gradual increase in the amount injected of from a dram to an ounce. On two or three occasions the fluid as it returned was tinged with blood, but no harm ensued.

December 20th she was discharged. Instead of micturating every hour she had only to get up once or twice during the night. Sixteen ounces could now be injected and less pain was caused than when four ounces was the limit. Two months later she was as well as when she left hospital.

It will be seen that the woman had a cystitis, with frequency of micturition, which latter remained after the former was cured; that any indication there was for further treatment was attended to either medicinally, topically, or by operation, but that still the frequent micturition continued; that the bladder was then found smaller than normal, both by measurement with the sound and by the much more certain method of measuring its capacity, and that this capacity was increased fourfold by what may be called *slow operative dilatation of the bladder*, and that the results were in all respects satisfactory. There has this week presented itself at the infirmary a case of cystitis where the bladder capacity is three ounces, and we propose soon to begin dilatation.

**The Experience of the United States in recent years with regard to Asiatic Cholera and Yellow Fever.**—In a paper read before the International Medical Congress by J. S. Billings, M.D., (Washington) referring to the risk which the United States runs from the importation of cholera during periods of emigration the author pointed out the necessity of some international system of notifying the existence of the disease in the various ports in the civilized world, and of some quarantine measures which should include the thorough aëration and cleansing of vessels. As to yellow fever he explained that the majority of physicians in the United States

accepted Dr. Chaillé's views—that the poison had a limited period each year for its reproduction; that immunity from attack among natives and others is due to a prior attack of the disease; that the preservation and growth of the poison is favored in places containing warm, damp, foul air, such as exists in the holds of ships; and that the influence of latitude on the disease is solely due to temperature. As regards the influence of quarantine, both in cholera and yellow fever, the author pointed out that the American system practically failed; that quarantine to be successful should be as defined by the Vienna Conference, and should consist rather in rigid medical inspection than in mere detention of vessels. When yellow fever has gained a hold in the country the means for staying its spread are isolation, disinfection, and depopulation; and he feared that the disease once existent would not be stayed by any mere perfection of the sanitary arrangements of the district in question, although it was difficult to express any final opinion as to this, because in the yellow fever region there was no city which could be deemed to be in a proper sanitary state. In the author's opinion each government should secure trustworthy information as to the existence of certain diseases, such as cholera, yellow fever, and plague, within its district. This information should be communicated to the other parties to the agreement by means of their consuls and otherwise; the bills of health needed by any Government should be signed by its own agents, who should both have the right to inspect the ships in question and be free to notify by telegraph to their respective governments the departure of any ship from an infected port. The bill of health instead of being either clean or foul should be a certificate in detail as to the sanitary condition of the port and ship.

**Ribemont on Tardy Ligation of the Umbilical Cord.**—Dr. J. G. S. Coghill, in his address in Obstetric Medicine before the British Medical Association, called attention to an extremely interesting and valuable communication with reference to the time and mode of separating the fetus and umbilical cord which had been made by Ribemont in a recent number of *Les Archives de Tocologie*, and which shows satisfactorily the great influence of the "thoracic aspiration" of the fetus on the umbilical circulation before its ligature. This was first pointed out by Budin, but is denied, among others by Schücking. Determined by the manometer it was found that—

1. Tardy ligature of the cord benefits the child by increasing the quantity of blood which is required for the establishment of the third circulation—that is, the fetal pulmonary.

2. The immediate ligature of the cord deprives the infant of a quantity of blood, larger or smaller in proportion to the time of ligature; and it especially deprives it of necessary blood if the ligature has been applied before the child has breathed.

3. The early ligature of the cord thus compels the abstraction of the blood necessary to establish the pulmonary circulation from the general circulation. The result is a diminution of the arterial tension equal to one third of the initial tension.

4. The cause of the penetration of the blood into the pulmonary circulatory system of the child is the "thoracic aspiration." This is proved by the constant superiority of the pressure of the blood in the umbilical arteries to that in the umbilical vein. Again, the thoracic respiration is observed to produce considerable oscillations in the tension of the arterial and venous blood. The uterine contractions are utterly insufficient to force any blood along the umbilical vein when the arterial pulsations of the cord have ceased.

5. Thoracic aspiration causes the *sufficient* and *necessary* amount of blood to enter the pulmonary vessels; *sufficient* because under these circumstances the tension in the arterial system does not fall; *necessary* because the arterial tension in the umbilical cord of a newly-born child is never seen to rise after tardy ligature of the cord.

Prof. W. T. Lusk, of New York, in corroborating Ribemont's views says that in children born pale and anemic, and suffering from syncope, late ligation of the cord furnishes an invaluable means of restoring the equilibrium of the fetal circulation.—*British Med. Journal.*

**Rodent Ulcer and Epithelioma.**—Rodent ulcer and epithelioma are undoubtedly closely allied affections, though rodent ulcer differs in some important respects from epithelioma. It does not affect lymphatic glands while epithelioma does, and often at an early stage of the disease. It is a rather dry ulceration with only a little secretion and no fetor, and the granulations are small In epithelioma the secretion from the ulcerated surface is abundant and fetid, and the granulations large, exuberant, and often in bosses. Rodent ulcer is confined to the upper part of the face, while epithelioma has a preference for certain localities, and may under certain conditions attack any part of the body. The points of resemblance between rodent ulcer and epithelioma are: Both rodent ulcer and epithelioma are new growths composed mainly of epithelial cells; and the new growth is only partly involved in the ulceration. As the growth increases and includes more of the skin and deeper tissues, so the ulceration continues to extend; but the ulceration does not go beyond the new deposit.

On one point I am quite settled, that rodent ulcer if left will in time so change its character as to become true epithelioma. I can not say whether this change is due to a mere progress of the disease or whether it is that rodent ulcer is peculiarly apt to have superadded to it the characters of epithelioma after the same manner as that of old standing ulcers, unhealed wounds or scars, or other simple sores that become epitheliomatous.—*Lawson, Ophthalmic Hospital Reports.*

**Bromide of Sodium and Epilepsy.**—Dr. Hammond's experience has proved the following to be one of the best plans of treatment for epilepsy: Dissolve eight ounces of bromide of sodium in a quart of water. Of this take a teaspoonful three times a day. After three months add one teaspoonful more to the night dose, and after another three or four months add a teaspoonful to the afternoon dose also. At the expiration of a year do the same with the morning dose, and continue with this for a year or more thereafter. If no symptoms of the disease have meanwhile appeared then gradually reduce the doses, and at the expiration of the third year stop. The attacks do not usually return after this course of treatment. Ordinarily, however, patients stop the medicine after a month or two, and in such cases the attacks almost invariably return. It is then almost impossible to bring these patients under the influence of the bromides again. The doses will have to be at least doubled, and this may so derange the system as to make it impossible to take the medicine longer.

**Potassium Bromide in Orchitis and Inflamed Breasts.**—J. Grammer, M.D., says that when consulted in time he finds nothing else necessary either in orchitis or milk-breast but potassium bromide in five-grain doses three times a day, or smaller doses more frequently repeated. In advanced or complicated cases a course of auxiliary measures should be used if only as a precaution or to expedite the cure; but he has never had the bromide to fail him even when used alone. In orchitis a suspensory should always be worn. In some of these cases he has seen the disease held in abeyance for weeks, when the patients would persist in the grossest imprudence in walking and horseback riding. He rarely restricts them in diet. Yet even these cases eventually recovered, without suppuration or atrophy, neither of which results has he seen since he has used this remedy. He has had no opportunity to test it in the metastatic orchitis of mumps, but is sure it will prove as useful here as in the ordinary cases; and though the inflammation is specific he expects to find the remedy efficient in the next epidemic of parotiditis he may meet with.

Dr. Grammer has seen but one case of mammary abscess since he commenced the use of the bromide of potassium for such cases, and that case occurred not long ago. The abscess had already pointed when he first saw it. He opened it and prescribed potassium bromide (two grains) every three hours during the day, and in less than a week her husband reported the patient well. This, however, was not a fair test of the effect of the bromide on a mammary abscess, for there was no infant to complicate or irritate the inflammation. It was to Dr. Grammer a unique instance of the secretion of milk during pregnancy. The woman was four or five months advanced with her fourth child, and she stated that being habitually rather irregular she always recognized her pregnancy by the appearance of milk, the secretion of which thenceforth continued.—*Virginia Med. Monthly.*

**Mysophobia.**—The following report by J. C. Shaw, of Brooklyn, is from the Archives of Medicine for October, 1881:

E. J., aged fifteen, brought to me by his mother on May 26, 1879. For the past few years has enjoyed good health. About six weeks ago the first decided symptoms appeared, but for months before his mother had noticed that he was excessively particular to wash his hands very clean, which is unusual for boys, as she remarks. About six weeks ago he began to say to her that he had been touching the paint; did she think it would come off the wall and poison him? He would not take off his own hat, but ask her to do it for him; also to unbutton his coat. If he wished to come in the front door he would not take out his night-key and come in, but would knock on the door with his elbow. He is afraid that if he touches any thing with his hands it will poison him. Every time he touches *any thing* he is very particular to wash his hands very clean. He spat on the carpet a few days ago, and then rubbed it off with his boot. He immediately came down stairs to his mother, told her about it, and asked if she thought he could have got any of the color off the carpet so as to poison him. He would go about holding his hands and arms away from his body as if he were afraid of touching his clothes. When he goes to bed at night he will wash his hands a dozen times and use as many towels. If prevented from doing this he appears disturbed, and will sometimes rush over to the water-pitcher and thrust his hands in, which appears to satisfy him. For a short time past he has frequently asked his mother if he had cobwebs on his face, and especially about his mouth. His mother thinks that of late he has presented a vacant, idiotic expression that he never used to have.

When the boy is talked to he speaks sensibly, but will give no explanation of why he is afraid of being poisoned by touching things; says he has frontal headache at times, especially when he goes to school; for the past six weeks has not gone to school, and has not had the headache, but a few days ago had a sharp pain in left occipital region. He looks dull and apathetic; is not given to self-abuse. He has a decided neurotic family history. The brother and father of his mother suffered from some nervous disorder, but no accurate account of it could be obtained; but I infer that it was a mental disorder. The marked neurotic family history in this case inclines me to the opinion that graver mental disorder will be developed in this boy.

**Mode of Absorption of Mercury.**—After the inunction of the ointment of mercury in rabbits and men Furbrenger failed to discover any trace of mercury in the rete Malpighii of the skin, but globules were visible in the hair-follicles and in the sweat-ducts. If, however, the epidermis was first removed the metal was then found in the corium, but only a few isolated globules could be seen in the deeper layers of the skin and in the subcutaneous tissue. After exposure to mercurial vapor no mercury could be found in the hair-follicles or sweat-ducts, although the surface of the skin was covered with a gray deposit. Twenty-four hours after an injection of a mercurial emulsion into the jugular vein the presence of dissolved mercury in the blood could be demonstrated in five out of eleven experiments, and the liver always contained mercury in a state of solution. Hence it seems certain that metallic mercury becomes dissolved in the blood. The metallic mercury in the hair-follicles was considerably diminished in quantity in eight days, and those globules which remained were oxidized on the surface, angular, and dirty-black in color. It is probable that the fatty acids of the skin assist in the solution.—*London Lancet.*

**The Effects of Oil of Tansy.**—Dr. G. Jewett (Boston Med. and Surg. Jour.) reports eight cases of poisoning with this drug. Case 1: Fifteen drops at 11 A.M., teaspoonful at 2 P.M.; convulsions, shock, general cyanosis; recovery. Case 2: Teaspoonful to promote catamenia; convulsions and death in one hour and a half. Case 3: Unknown quantity to cause abortion: convulsions; death in three hours and a quarter; no abortion. Case 4: Teaspoonful to cause abortion; coma, recovery; no abortion. Case 5: Four drams; spasms and death. Case 6: To cause abortion; rapid death; no abortion. Case 7: Decoction of tansy-leaves to produce abortion; paralysis; coma; death in twenty-four hours without abortion. Case 8: Infusion of leaves daily for a week; also for vaginal injection; abortion, metritis, peritonitis; recovery after three months. As druggists are often asked for oil of tansy under various pretenses we believe the above table will be useful in reminding them of the dangers attending the sale of tansy and its preparations.